



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,804	10/06/2003	Teresa Joanne Hunkeler	I-2-0388.1US	3395
24374 7590 03/09/2009 VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103				
EXAMINER				
HAILU, KIBROM T				
ART UNIT		PAPER NUMBER		
2416				
MAIL DATE		DELIVERY MODE		
03/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/679,804

**Applicant(s)**

HUNKELER ET AL.

**Examiner**

KIBROM T. HAILU

**Art Unit**

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8, 13, 14, 16, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8, 13, 14, 16, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 23, 2009 has been entered.

***Response to Arguments***

2. Applicant's arguments filed on February 23, 2009 have been fully considered but they are not persuasive because the references provided disclose the claimed invention as set forth in the previous office action.

**Note:** As a matter of fact, the current application clearly explains that when a user moves from one type of wireless communication system, such as GSM, CDMA, W-CDMA, UMTS, WLAN and so on, to another system, the user's application cannot continue unless translation or mapping of QoS requirements is done or performed. Likewise, Reynolds explicitly discloses a handover is performed between said wireless communication systems without interrupting the session or the user's application (col. 1, lines 27-46; col. 2, lines 4-61). In this case, mapping or translating of the QoS requirements are/would have been inherent because all the above *wireless communication systems have different QoS requirements*. However, to avoid such inherent argument, in the previous office action, the Examiner provided Wang, which clearly teaches the translation of QoS requirements between different networks or systems (ol. 1, lines 23-27). Note also that the Examiner has/reserves every right to go back and apply the above fact (inherency).

The Applicants' arguments on page 6-10 of the REMARKS/ARGUMENTS are not persuasive, and therefore, the claims are not patentable in view of the cited references and the following discussion.

Basically, on page 6-8, the Applicants argue that claims 8 and 22 are not disclosed by the Reynolds and Wang. Applicants do not explicitly explain on how Reynolds and Wang do not disclose the limitations. The Applicants are only described what the references are all about in contrast to claims 8 and 22.

**First**, the Applicants argue that Reynolds doesn't disclose a processor in WTRU for determining whether the predetermined QoS requirements are satisfied and selects and hands over to a second type of wireless communication system. Neither does the current application, let alone a processor. Please, read the first paragraph of *35 USC § 112* rejection below regarding to this limitation.

Having said that, the Examiner doesn't agree with the above Applicants' arguments because Reynolds clearly discloses selecting a second type of wireless communication system or access technology and hand over to it based on the determined QoS requirements (please, see col. 5, lines 34-67).

**Second**, the Applicants argue that Reynolds is silent as to a translator configured to translate QoS requirements of the first type of wireless communication system to QoS requirements of the second type of wireless communication system. Well, as explained above, Reynolds discloses handover between the wireless communication systems during a single communication session. And it is a fact that these different wireless communication systems have different QoS requirements. Therefore, since handover is performed between these different

types of wireless communication systems without interrupting the session, it would have been inherent to translate the QoS requirements. However, as mentioned above, the Examiner provided the Wang's reference to avoid further inherency argument. In the argument, the Applicants ignored the explicitly cited col. and lines by the Examiner in the previous office action. Herein, the Examiner directly quotes col. 1, lines 11-27 again:

“Communication networks are often interconnected so that users of different networks can communicate with one another. The Internet is a familiar example. Many enterprises also have intranets in which a backbone network is linked to a plurality of local area networks, *mobile communication networks*, and the like.

For many types of communication, a certain quality of service (commonly abbreviated QoS) must be provided. Different networks have different methods of defining and implementing quality of service, so when a communication link passes through several networks, it is not easy to provide an end-to-end QoS guarantee. A conventional method is to *use look-up tables, referred to as QoS mapping tables, to translate quality of service in one network to quality of service in another network*, but there are certain problems involved in this method”

In other words, Wang teaches translating the QoS requirements between the different networks. Therefore, the Applicants' argument regarding translating or mapping of the QoS requirements is not persuasive.

**Third**, the Applicants also argue that Reynolds doesn't disclose the application established in the first type of wireless communication system using the predetermined QoS requirements is continued in the second type of wireless communication system using the translated quality of service requirements. First of all, the Examiner could not find, “the

application established in the first type of wireless communication system *using the predetermined QoS requirements...*” in the specification. What the specification describes is that an application or service is initiated first, and then the QoS requirements are specified on a bearer in accordance with the QoS requirements of the particular type of wireless communication system in which the application was initiated. The limitation is also indefinite and very vague. Please read the second paragraph of the *35 USC § 112* rejection for this. However, Reynolds explicitly discloses a user initiates a session for a service or application in one type of wireless communication system to another and continues the service when roaming to another communication system. As per the establishing the application using predetermined QoS requirements is not what the specification describes.

**Finally**, the Applicants argue that neither reference discusses the determination of whether handover should be performed occurs in the WTRU, translating QoS requirements in the WTRU, and Reynolds discusses a wireless network but not Wang. Well, the Examiner doesn't agree. **(A)** Reynolds explicitly discloses the function of the handover is accomplished within the mobile station (see, col. 2, lines 28-40). Meaning, the mobile is capable of communicating via each of the radio access or communication systems is nothing but handing over is performed occurs in the WTRU. **(B)** Wang clearly teaches the mapping the QoS requirements are also within the end user (wireless device) (see col. 4, lines 5-9). **(C)** The Applicants' argument that Wang doesn't discuss a wireless network but only a wired network is not correct because it doesn't even mention that the LAN is wired network. LAN can be wireless and wired. In fact, Wang describes that the communication networks are *mobile communication networks* (col. 1, lines 16-17). And we know that *mobile is not wired but wireless*. What is important is translating

or mapping the QoS requirements between different networks, and that is exactly what Wang is doing.

Therefore, as clearly applied above, the claimed invention is not patentable in view of the previously provided references and the response to the Applicants' arguments.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 8 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation, "processor configured to determine whether the predetermined QoS requirements are satisfied in the first type of wireless communication system and to select a second type of wireless communication system to handover to in response to a negative determination, and to handover to the second type of wireless communication" is not described in the specification, even the concept is totally different from what is being explained in the specification. According to the specification, every wireless communication system has its own QoS requirements. When a user hands over from one system to another while in session, the session seamlessly continues by just switching or mapping or translating from the QoS requirement of the first system to the second QoS requirement of the second system, the system

that the user hands over. The specification doesn't describe determining whether or not predetermined QoS requirements are satisfied in the first wireless communication system and then select the second communication system to handover based on or when the QoS requirements are not satisfied. In other words, the specification explains only a determination whether or not handover to another type of wireless communication system is occurred. Then, continues or translates the QoS requirements based on the determination, not the other way around. The Examiner couldn't even find, in the specification, a processor that configures the determination as claimed. Herein, the Examiner respectfully requests the Applicants to explicitly cite where in the specification that the amended limitation is found or explained.

The limitation, "Wherein the application established in the first type of wireless communication system *using the predetermined QoS requirements* is ..." is also not described in the specification. The specification explicitly describes an application or service is initiated first, and then the QoS requirements are specified on a bearer in accordance with the QoS requirements of the particular type of wireless communication system in which the application was initiated. The main concern here is that the continuation of the user's application and/or session when handing over from one communication system or network to another. As per defining QoS requirements for each of the networks, as applied above, is clearly disclosed by Wang and the concept is taught by Reynolds.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.



6. Claims 8 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation, “Wherein the application established in the first type of wireless communication system using the predetermined QoS requirements is continued in the second type of wireless communication system using the translated quality of service requirements” is not only vague but also it not clear. It is unclear whether or not “the predetermined QoS requirements” is the QoS requirements of the first wireless communication system. It is also misleading when the Applicants say, “...continued in the second type of wireless communication system using **the translated quality of service requirements**” because it sounds that the QoS requirements of the first type of wireless communication system is somehow transformed. But the specification clearly describes each of the wireless communication systems has its own QoS requirements. Therefore, when a user moves from one communication system to another, he/she also switches to another QoS requirements in accordance with the other (second or current) communication system. In short, it is not that the QoS requirements transformed but the user uses another QoS requirement(s) appropriate to the current (the handed over) communication system. Therefore, for further examination, the Examiner interpreted the “translated quality of service requirements” as the second QoS requirements corresponding to the second communication systems.

The phrase, “... to handover to in response *to a negative determination*” is not clear. It is unclear as to what “a negative determination” means. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 8, 14, 16 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds (US 7,149,524 B2) in view of Wang (US 6,693,912 B1).

Reynolds discloses a wireless transmit/receive unit (WTRU) (8) configured for mapping quality of service (QoS) requirements of a first type of wireless communication system to QoS requirements of a second type of wireless communication system (col. 5, lines 50-65), the WTRU comprising: an application configured to perform for performing a wireless service having predetermined QoS requirements and processor configured to determine whether the predetermined QoS requirements are satisfied in the first type of wireless communication system and to select a second type of wireless communication system to handover to in response to a negative determination, and to handover to the second type of wireless communication system

(Fig. 1; col. 2, lines 37-50; col. 5, lines 34-67); a transceiver to transmit and receive data using a bearer (Fig. 1; col. 2, lines 28-37).

Reynolds further discloses handing over or switching from the quality of service of the first wireless communication system to quality of service requirements of the second type of wireless communication system (col. 5, lines 50-65), plurality of wireless communication system (GSM, WLAN, WCDMA) and their corresponding bearers (Fig. 1), and service or application established in the first type of wireless communication system using the predetermined QoS requirements of the first type of wireless communication system is continued in the second type of wireless communication system, and handing over to the second type of wireless communication system when its QoS is better than the first communication system (col. 5, lines 36-65; col. 1, lines 25-46; col. 3, lines 55-64). However, Reynolds doesn't explicitly disclose a translator configured to translate quality service or predetermined QoS requirements of the first communication system to quality of service requirements of the second communication system.

Wang teaches a translator configured to translate quality service predetermined QoS requirements of the first communication system to quality of service requirements of the second communication system (col. 1, lines 23-27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use translating the QoS requirements as taught by Wang into the communication networks of Reynolds in order to provide an improved arrangement which doesn't add to cost or complexity of the mobile station or terminal.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds in view of Wang, as applied to claim 9 above, and further in view of Persson et al. (US 7,206,324 B2).

As applied above, Reynolds discloses plurality of wireless communication networks (such as CDMA) and hand over between them (Fig. 1). Reynolds doesn't explicitly disclose the first type of wireless communication system is UMTS.

Persson teaches the first type of wireless communication system is UMTS (col. 2, lines 24-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the UMTS of Persson into the communication networks of Reynolds so that the communication session would not be interrupted when the user enters into the UMTS network environments.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIBROM T. HAILU whose telephone number is (571)270-1209. The examiner can normally be reached on Monday-Thursday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kibrom T Hailu/

Examiner, Art Unit 2416

/Ricky Ngo/

Supervisory Patent Examiner, Art Unit 2416